

## CASE REPORT

# EPIDERMOID INCLUSION CYST OF THE PERINEUM- A RARE CASE REPORT IN A 50 YEARS OLD MALE

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A 50 year old male presented with a history of mid line painless swelling in the perineum for last 4 years. The patient's only concern was a perineal swelling which was gradually increasing in size. Clinical examination mimics subcutaneous lipoma with soft lobulated surface with positive slip sign. The base line investigations were within normal limits. Complete surgical excision of the cyst performed. Histopathology confirmed epidermal inclusion cyst with no evidence of malignancy. Patient discharged on next day. The follow-up visits were un-remarkable. Perineal epidermal inclusion cyst is a rare entity and only few cases have been reported.

**Keywords:** Epidermal Inclusion Cyst, Perineum, Surgical Excision

## INTRODUCTION

Epidermal inclusion cyst refers to those cysts that are the results of the implantation of epidermal elements in the dermis. They result from the proliferation of epidermal cells within a circumscribed space of the dermis.<sup>1</sup> Their lipid pattern demonstrates similarities to the epidermis.<sup>2</sup> In addition they express cytokeratin 1 and 10, which are constituent of the supra basilar layers of the epidermis.<sup>3</sup> The source of this epidermis is often the infundibulum of the hair follicle, as evidenced by the observation that the lining of the two structures are identical.<sup>4</sup> They grow slowly and are usually asymptomatic until they become inflamed or secondarily infected which is partly due to chemo tactic induced for polymorphs by honey layer in the cyst.<sup>5</sup> Older cyst may exhibit calcification or a foreign body reaction.<sup>5</sup> An important finding is the occasional presence of malignancy usually Squamous cell carcinoma, basal cell carcinoma and occasional metastatic carcinoma with a possible role of repetitive trauma and inflammation.<sup>6</sup> On histopathology Cysts are lined with stratified squamous epithelium that contains a granular layer and is filled with keratinous material that is often in a laminated arrangement.<sup>4</sup> Perineal Epidermal cyst is a rare presentation and only few cases have been reported.

## CASE REPORT

A 50 year old male presented with a history of painless midline swelling in the perineum behind the scrotum for last 4 years. Patient was in-complete state of excellent health about 4 years back when he noticed a small swelling posterior to the scrotum. The swelling gradually increased in size over the period of 4 years. The swelling is not associated with history of trauma, pain, itching, and discharge nor with any complain during micturation or defecation. On examinations the swelling was in perineum, oval in shape, measure 4×3 cm with no punctun (Figure-1).

It was non tender, normo thermic, lobulated surface, soft to firm in consistency, over lying skin was pinchable, mobile on underline structure and slip sign was positive. Fluctuation and trans-illumination were absent. Testes were normal and digital rectal examination was unremarkable. Regional lymph nodes were not enlarged.

The patient's only concern was gradual increase in the size of the swelling. There was no significant or relevant past medical or surgical history. He was non smoker and his vital and general physical signs were normal. His base line investigations revealed hemoglobin 12.3/dl and random blood sugar 86 mg/dl. Screening for Hepatitis B and C were negative. Upon surgical exposure during excision, the cyst found confined to the subcutaneous area in the perineum. (See Figure-2 and 3).

Histopathology confirmed epidermal inclusion cyst with fragments of wall of cyst, composed of fibro-collagenous tissue, lined by stratified epithelium, containing keratin flakes in its lumen (Figure-4).

## DISCUSSION

Epidermal inclusion cysts are approximately twice as common in men as in women. They may occur any time in life, but they are most common in the 3<sup>rd</sup> and 4<sup>th</sup> decades of life. They are commonly distributed all over the body but uncommonly reported in the perineum<sup>1</sup>. Although most patients deny a history of trauma a mechanical pressure or a minor trauma may be a contributing factor.<sup>7</sup> The epidermal cyst in perineum can involve scrotum and penis and larger cysts can displace anus and vagina and can extend into pelvic space adjacent to the rectum.<sup>8-10</sup> The cyst may become inflamed or infected, resulting in pain, tenderness and may be associated with foul smelling cheese like discharge. However, in the uncommon event of malignancy, rapid growth, friability and bleeding have been reported.<sup>6</sup> Lesions of the genitals and perineum can

be painful during intercourse and cause problems with walking or wearing undergarments. They can also interfere with urination.

Ideal workup of the cyst includes fine needle aspiration for diagnosis and bacterial culture for infected cases. The imaging studies for diagnosis includes Sonography, MRI, CT scan and plain radiography. The treatment of perineal epidermal inclusion cyst is surgical excision with a careful and meticulous dissection with precaution taken to avoid spillage of the contents and also to avoid injury to vital structures near by, such as perineal urethra and anal canal.

The cases of mid line inclusion cyst in the perineum are rare entities and only few cases have been reported in the world literature.<sup>1,8-10</sup> Even after intensive web search we did not find any such case reported nationally so far. For this case we observed diagnostic dilemma as we consider lipoma, sebaceous cyst and dermoid cyst in differential diagnosis. Hence we conclude epidermal inclusion cyst although rare should be considered in differential diagnosis of any midline lump in the perineum. Surgical excision should be performed not only for relief of symptoms and diagnosis but also to rule out uncommon and occasional malignancy.



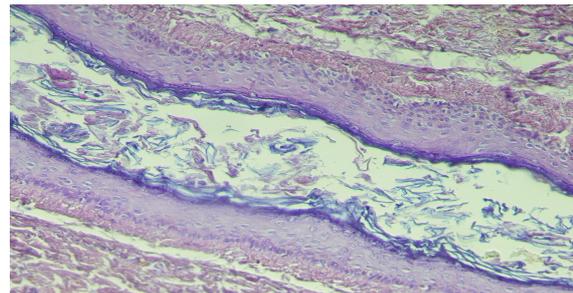
**Figure-1: Midline perineal swelling between anal canal (Left) and scrotum (Right)**



**Figure-2: Epidermal inclusion cyst being excised**



**Figure-3: Excised specimen of complete epidermal inclusion cyst**



**Figure-4: Histopathology of the epidermal inclusion cyst wall lined by stratified epithelium, containing keratin flakes in its lumen**

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